## Amendments to the Claims under 37 C.F.R. § 1.121

Claims 1-7 (cancelled).

Claim 8 (currently amended): A method for detecting human papilloma virus DNA in a cell sample which indicates the patient providing the cell sample is at risk for cancer comprising:

(a) adding ~~the reagent of claim 1~~ a reagent comprising a plurality of genomic HPV DNA probe sets to the cell sample under suitable hybridization conditions, wherein:

(i) a first genomic HPV DNA probe set comprises a plurality of nucleic acid fragments having different nucleotide sequences that detectably hybridize to a plurality of different nucleotide sequences of essentially the full-length genomic sequence of HPV type 16,

(ii) a second genomic HPV DNA probe set comprises a plurality of nucleic acid fragments having different nucleotide sequences that detectably hybridize to a plurality of different nucleotide sequences of essentially the full-length genomic sequence of HPV type 18,

(iii) a third genomic HPV DNA probe set comprises a plurality of nucleic acid fragments having different nucleotide sequences that detectably hybridize to a plurality of different nucleotide sequences of essentially the full-length genomic sequence of HPV type 31,

(iv) a fourth genomic HPV DNA probe set comprises a plurality of nucleic acid fragments having different nucleotide sequences that detectably hybridize to a plurality of different nucleotide sequences of essentially the full-length genomic sequence of HPV type 33,

(v) a fifth genomic HPV DNA probe set comprises a plurality of nucleic acid fragments having different nucleotide sequences that detectably hybridize to a plurality of different nucleotide sequences of essentially the full-length genomic sequence of HPV type 35, and

(vi) a sixth genomic HPV DNA probe set comprises a plurality of nucleic acid fragments having different nucleotide sequences that detectably hybridize to a plurality of



McDonnell Boehnen Hulbert & Berghoff LLP
300 South Wacker Drive
Chicago, Illinois 60606
312-913-0001

different nucleotide sequences of essentially the full-length genomic sequence of HPV type 51;

wherein the nucleic acid fragments of the genomic HPV DNA probe sets detectably hybridize to the genomic sequence of HPV types 39, 45, 52, 56, 58, 59, 68 and 70;

and wherein the nucleic acid fragments of the genomic HPV DNA probe sets do not detectably hybridize to the genomic sequence of a low-risk HPV type; and[[;]]

(b) ~~detecting the presence or absence of hybridization inside cells~~ determining whether the nucleic acid fragments of the genomic HPV DNA probe sets detectably hybridize to HPV DNA in the cell sample.

Claim 9 (currently amended): The method of claim 8, wherein the ~~reagent probes hybridize to HPV types 16, 18, 31, 33, 35, and 51, but not to HPV types 6, 11, 41, 42, 43, and 44 in a cervical cell sample~~ proportion of total HPV DNA in the reagent that comprises nucleic acid fragments of the first genomic HPV DNA probe set and the proportion of total HPV DNA in the reagent that comprises nucleic acid fragments of the third genomic HPV DNA probe set are decreased relative to the proportions of the total HPV DNA in the reagent that comprise nucleic acid fragments of the other HPV DNA probe sets.

Claim 10 (currently amended): The method of claim 8, wherein the reagent ~~probes also hybridize to HPV types 39, 45, 52, 56, 58, 59, 68, and 70, and low stringency hybridization conditions are used~~ is hybridized to the cell sample at 45°C in a buffer comprising 2X SSC and 2% BSA.

Claim 11 (currently amended): The method of claim 8, further comprising pretreating the cell sample with a protease.

Claim 12 (currently amended): The method of claim 8, further comprising destaining and/or deparaffining the cell sample.



**McDonnell Boehnen Hulbert & Berghoff LLP**
**300 South Wacker Drive**
**Chicago, Illinois 60606**
**312-913-0001**

Claims 13-14 (cancelled).

Claim 15 (currently amended): The method of claim ~~14~~ 8, wherein ~~the reagent contains DNA probes in the following amounts: HPV 16 - 8.3%, HPV 18 - 20.8%, HPV 31 - 8.3%, HPV 33 - 20.8%, HPV 35 - 20.8%, and HPV 51 - 20.8%~~:

(a) the plurality of nucleic acid fragments of the first genomic HPV DNA probe set constitute about 8.3% of the total HPV DNA in the reagent,

(b) the plurality of nucleic acid fragments of the second genomic HPV DNA probe set constitute about 20.8% of the total HPV DNA in the reagent,

(c) the plurality of nucleic acid fragments of the third genomic HPV DNA probe set constitute about 8.3% of the total HPV DNA in the reagent,

(d) the plurality of nucleic acid fragments of the fourth genomic HPV DNA probe set constitute about 20.8% of the total HPV DNA in the reagent,

(e) the plurality of nucleic acid fragments of the fifth genomic HPV DNA probe set constitute about 20.8% of the total HPV DNA in the reagent, and

(f) the plurality of nucleic acid fragments of the sixth genomic HPV DNA probe set constitute about 20.8% of the total HPV DNA in the reagent.

Claim 16 (currently amended): The method of claim ~~15~~ 8, wherein the cell sample contains abnormal cervical cells.

Claims 17-22 (cancelled).



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**Chicago, Illinois 60606**
**312-913-0001**